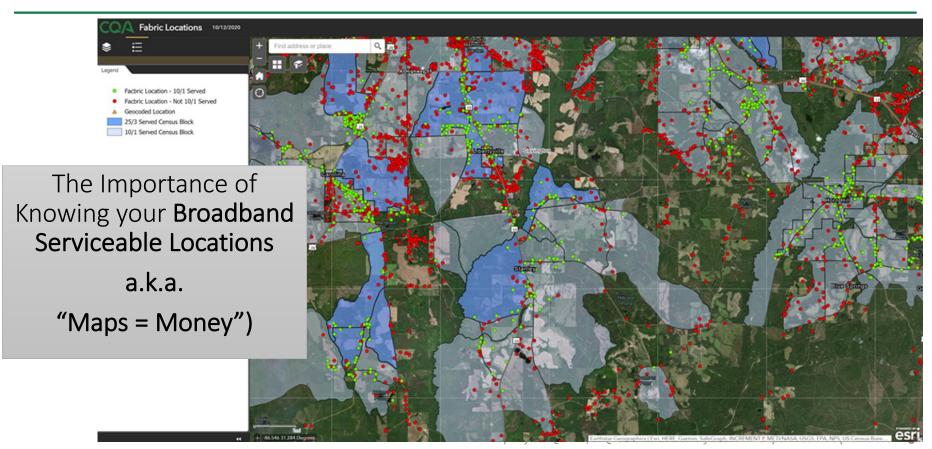


FCC Broadband Mapping Update / Implications for States

- DATA Act requires new FCC maps before funds can be awarded by FCC
- FCC process ("BDC/DODC") still has a ways to go. Likely mid-2022 (optimistic)
- Other federal agencies (NTIA, USDA) not required to use FCC maps (can "consult"), but raises the question: what maps will they use?
- In the meantime should States perform a dedicated data collection effort and/or other steps to bolster current mapping efforts?
 - ➤ Control your own destiny = yes

Threshold Question for States: What Does the "Money Map" Say?



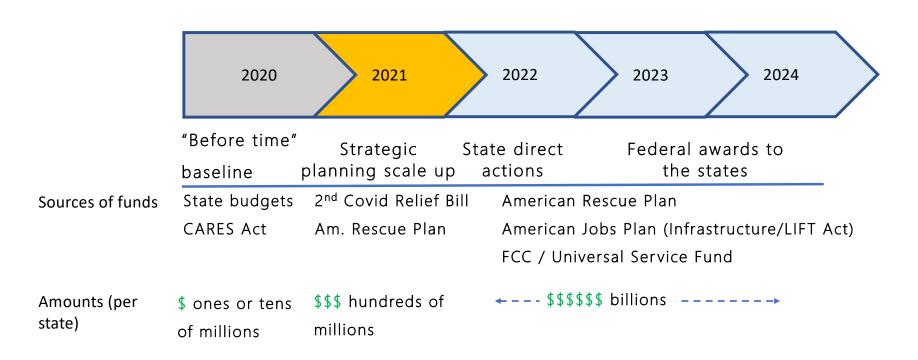
Once-In-a-Century Federal Funding for Broadband

- \$150+ Billion Historic Opportunity, 2021-2023
 - Affordability/Adoption \$10B+ (EBB, ECF/E-Rate, other grants)
 - Treasury "Capital Projects" \$10B (total State & Local \$350B)
 - NTIA/USDA ~\$10B (Tribal, HBCU, other grants; Re-Connect)
 - FCC RDOF/5G Fund/Rip&Replace/other: \$20+B
 - TBD LIFT Act / Infrastructure: \$94B (\$20B direct to states)
- Major Role for States, By Design and By Default

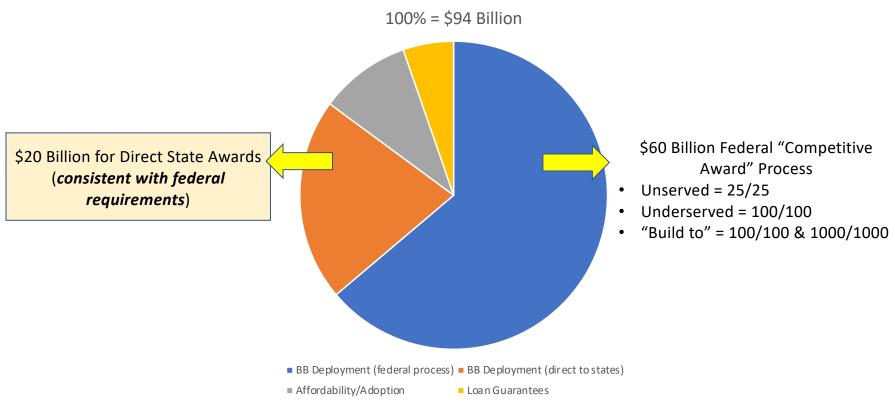
Strategic Pillars for State Broadband Strategies

- 1. Know your own economics
- 2. Tailor state strategy to maximize impact of new federal support
- 3. Use upcoming waves of funds strategically, not tactically play chess, not checkers

State Broadband Funding Timeline



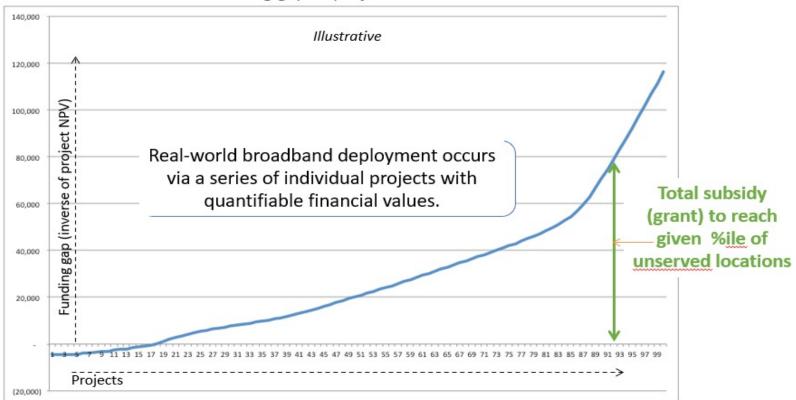
LIFT America Act Proposed Funding Levels for Broadband



Source: Lift America Act (draft as of May 2021)

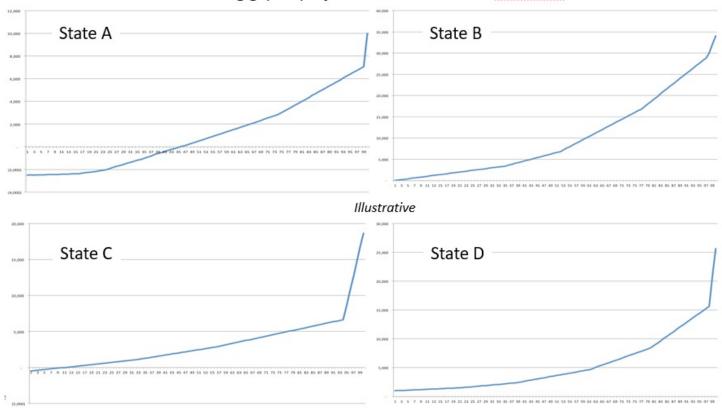
What Is the Basis of the \$80 Billion Funding Target?

Illustration: Cumulative funding gap of projects to reach 100% of un-served locations

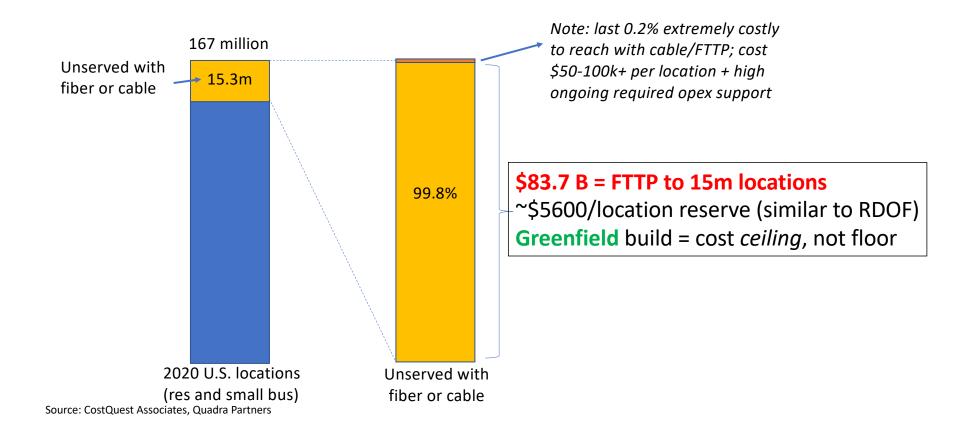


Overall U.S. Curve Is Just the Sum of the States

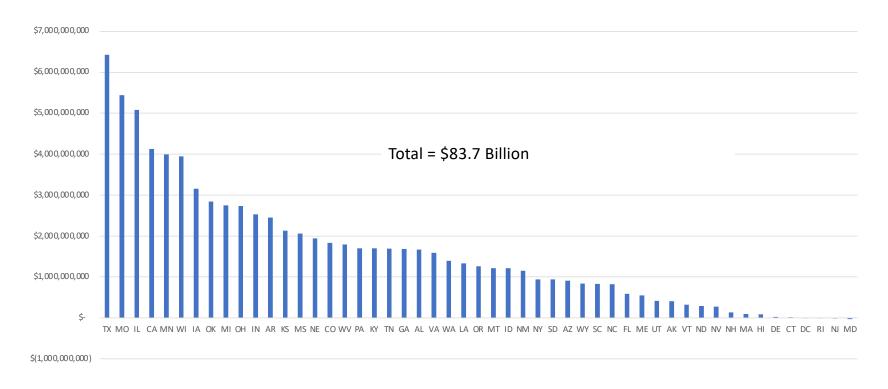




2020 Updated Analysis: How Far Should \$80 Billion Go?



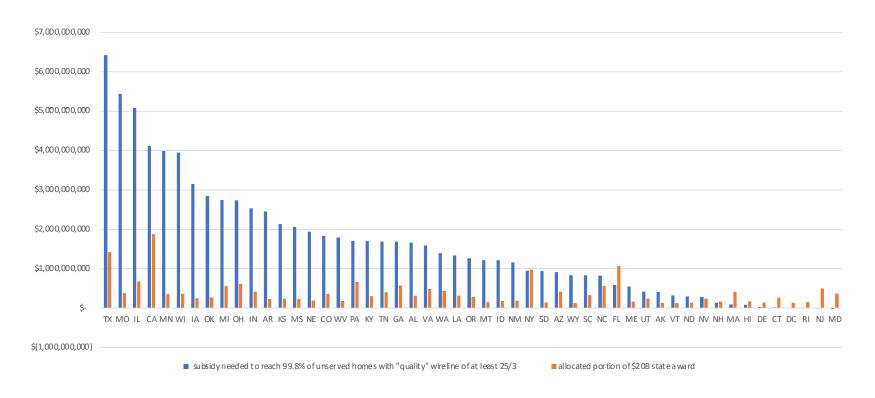
Estimated Support Needs¹ To Reach 99.8% of Unserved² Locations



¹ Defined as up-front funding required to achieve neutral 30-year Net Present Value of capex, opex, and revenues, including terminal value in year 30

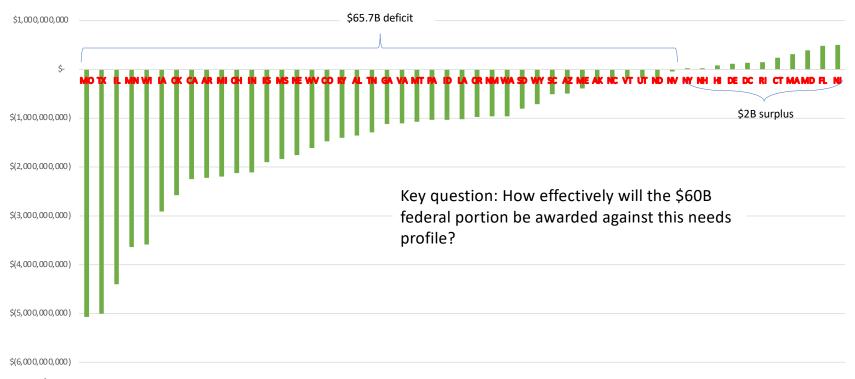
² "Unserved" definition ~consistent with 2017 FCC whitepaper: areas lacking service provided by cable or FTTP infrastructure Source: CostQuest Associates, Quadra Partners

Estimated Support Needs¹ vs Allocations from \$20B State Portion



¹ Calculated based on current LIFT Act allocation formula of \$20B total allocated based on \$100m per state + pro rata based on population Source: CostQuest Associates, Quadra Partners; Lift America Act (as of May 2021)

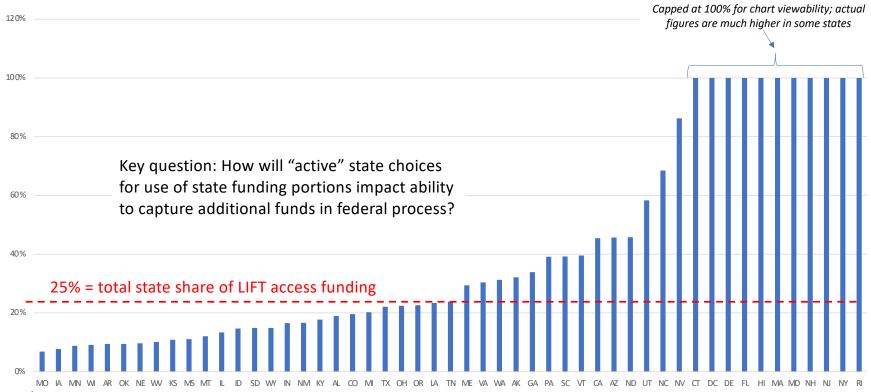
Deficit vs Surplus: State Allocations¹ vs Estimated Support Need²



¹ Calculated based on current LIFT Act allocation formula of \$20B total allocated based on \$100m per state + pro rata based on population

² State portion of \$83.7 billion total need based on state-level calculations of cost to reach unserved locations Source: CostQuest Associates, Quadra Partners; Lift America Act (as of May 2021)

State Funding¹ as % of Estimated Support Need²



¹ Calculated based on current LIFT Act allocation formula of \$20B total allocated based on \$100m per state + pro rata based on population

Source: CostQuest Associates, Quadra Partners; Lift America Act (as of May 2021)

² State portion of \$83.7 billion total need based on state-level calculations of cost to reach unserved locations

Given a Head Start, Why Settle for "Fair Share" of Funds?

Examples of state strategies to maximize capture rates of new federal support

- A. Matching, stacking, and other indirect grants (but preserving max "unserved" areas for federal funding eligibility)
- B. "Pre-funding" for public middle mile networks to support bidders
- C. Indirect financing support
- D. Tax incentives
- E. Regulatory streamlining and crossprogram synchronization

Many state broadband offices could be scaled up now using Treasury \$10b and other relief funds:

- State maps
- Tailored state bb economics
- Provider outreach/coordination
- Public consortium formation
- Adjusting state regulatory and legislative tools
- Other state policy preferences
- Studying NY CAF-II and other models

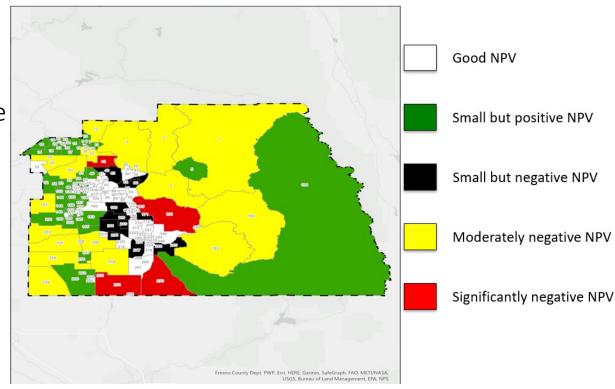
Example: Can Treasury "Capital Projects" Include Middle Mile?

U.S. Treasury, Covid Capital Projects guidance released May 10, 2021:

"Capital projects include investments in depreciable assets and the ancillary costs needed to put the capital assets in use. Under the American Rescue Plan, these projects must be critical in nature, providing connectivity for those who lack it. The Capital Projects Fund thus allows for investment in high-quality broadband as well as other connectivity infrastructure, devices, and equipment. In addition to supporting broadband, it also provides flexibility for each state, territory, and Tribal government to make *other* investments in critical community hubs or other capital assets that provide access jointly to work, education, and health monitoring..."

What Does "Know Your Economics" Mean in Practice?: PROJECTS

- NPV varies across geographies
- Key: funding may go to "areas," but what you care about are actual "projects"
- Targeted state interventions – such as promoting open middle mile – can dramatically improve total project NPVs



Tailoring Actions To Strengthen In-State Projects

Example: State Actions Can Amplify Ability to Capture Funds in Competitive Federal Process

